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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/773,815	01/31/2001	William T. Carpenter	P01426US2	8585

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EXAMINER

KRECK, JOHN J

ART UNIT

PAPER NUMBER

3673

DATE MAILED: 04/23/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/773,815

Applicant(s)

CARPENTER, WILLIAM T.

Examiner

John Kreck

Art Unit

3673

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1) Responsive to communication(s) filed on 19 February 2002.

2a) This action is FINAL. 2b) This action is non-final.

3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4) Claim(s) 11-20 is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5) Claim(s) _____ is/are allowed.

6) Claim(s) 11-20 is/are rejected.

7) Claim(s) _____ is/are objected to.

8) Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9) The specification is objected to by the Examiner.

10) The drawing(s) filed on _____ is/are: a) accepted or b) objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

11) The proposed drawing correction filed on _____ is: a) approved b) disapproved by the Examiner.

If approved, corrected drawings are required in reply to this Office action.

12) The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

13) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a) All b) Some * c) None of:

- 1) Certified copies of the priority documents have been received.
- 2) Certified copies of the priority documents have been received in Application No. _____.
- 3) Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

14) Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).

a) The translation of the foreign language provisional application has been received.

15) Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

1) Notice of References Cited (PTO-892)

2) Notice of Draftsperson's Patent Drawing Review (PTO-948)

3) Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____.

4) Interview Summary (PTO-413) Paper No(s) _____.

5) Notice of Informal Patent Application (PTO-152)

6) Other: _____.

DETAILED ACTION

The amendment dated 2/19/02 has been entered.

Claim Objections

Claim 12 is objected to because of the following informalities: in line 2, please insert "in" after "positioned". Appropriate correction is required.

Claim Rejections - 35 USCC § 112

The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

1. Claims 12, 16, and 19 are rejected under 35 U.S.C. 112, first paragraph, as containing subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention. Claim 12 calls for the compensating substance to be located in an underground cavity. It is apparent that the mass of compensating substance required to achieve a change in the character of rotation must be very large (see, for example: *Chao, B. F., Anthropogenic impact on global geodynamics due to water impoundment in major reservoirs, Geophys. Res. Lett.*, 22, 3533-3536, 1995., in particular, page 3530, col. 2, line 10; 100km³) It is well known in the mining arts that it is difficult to construct large cavities in rock, because the weight of overburden on the roof has a tendency to be drawn towards the floor. The largest

excavated underground cavities are several orders of magnitude smaller than the size required in order to achieve a change in the character of rotation (see, for example: *SME Mining Engineering Handbook*, page 2126, col. 1, third paragraph; 11.6M m³, or about 1.2×10^{-2} km³; which is about one eight thousandth of 100km³). Without any specific disclosure of how to construct such a large underground cavity, one skilled in the art would be unable to practice the claimed process.

Claim Rejections - 35 USC § 102 and 35 USC § 103

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

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2. Claims 11, 13, 14, 15, 17, 18, and 20 are rejected under 35 U.S.C. 102(b) as being anticipated by Darwin "On the Influence of Geological changes on the Earth's Axis of Rotation".

Darwin teaches the steps of determining the mass of the Earth; determining the center of mass of the Earth; characterizing the axis of rotation of the Earth; selecting a desired character of rotation; calculating a moment of stability required to cause the desired character of rotation; and determining a position and mass of a compensating substance to effect the moment of stability and positioning the mass as called for in claim 11.

Darwin also teaches the aboveground cavities (see page 296) as called for in claim 13.

Darwin also teaches the solid (rock or ice) as called for in claim 14.

Darwin also teaches the liquid (seawater) as called for in claim 15.

Darwin also teaches the liquid (seawater) as called for in claim 17.

Darwin also teaches the water as called for in claim 18.

Darwin also teaches the water as called for in claim 20.

3. Claims 11, 12, and 13 are rejected under 35 U.S.C. 102(b) as being anticipated by *Hapgood, Charles The Path of the Pole, 1970*. See, in particular, page 362, first paragraph.

Hapgood teaches the method of modifying the axis of rotation of a planet comprising the steps of measuring the mass of the planet; determining the center of mass of the planet; characterizing the axis of rotation; selecting a desired character of

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rotation; calculating a moment of stability required to cause the desired character of rotation; determining a position and mass of a compensating substance sufficient to effect the moment of stability and positioning the mass as called for in claim 11.

Hapgood also teaches the underground cavity as called for in claim 12.

Hapgood also teaches the aboveground cavity as called for in claim 13.

4. Claims 14-20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hapgood.

Hapgood fails to teach whether the compensating substance is liquid or solid. It would have been obvious to one of ordinary skill in the art at the time of the invention to have modified the method taught by Hapgood to have included solid as called for in claim 14, liquid as called for in claims 15-17, or water as called for in claims 18-20; based on material availability.

5. Claims 11-20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Chao, B. F., Anthropogenic impact on global geodynamics due to water impoundment in major reservoirs, *Geophys. Res. Lett.*, 22, 3529-3532, 1995.

Chao teaches the steps of measuring, determining, and characterizing. Chao fails to explicitly teach the selecting a desired character of rotation, calculating a moment of stability, determining a position and mass, and positioning the mass. It is a well known principle to correct environmental problems made by man. It would have been obvious to one of ordinary skill in the art at the time of the invention to have

measured the mass of a planet, determined the center of mass, characterized the axis of rotation, selected a desired character of rotation, calculated a moment of stability required to cause the desired character of rotation, determined a position of and mass of a compensating substance sufficient to effect the moment of stability, and positioned the mass in the position (either by removing the existing dams, and thus redistributing the captures water; or by moving other masses to compensate), as called for in claim 11, in order to correct the alterations to the axis of rotation characterized by Chao.

With regards to claim 12, see page 3531, col. 2, it would have been further obvious to one of ordinary skill in the art at the time of the invention to have the position of the compensating substance in an underground cavity in order to correct the alterations to the axis of rotation characterized by Chao.

With regards to claim 13, Chao teaches the aboveground cavity, thus it would have been further obvious to one of ordinary skill in the art at the time of the invention to have the position of the compensating substance in an underground cavity in order to correct the alterations to the axis of rotation characterized by Chao.

With regards to claim 14, it would have been further obvious to one of ordinary skill in the art at the time of the invention to have the compensating substance a solid, because solid substances are less likely to move over time, in order to correct the alterations to the axis of rotation characterized by Chao.

With regards to claim 15-17, Chao teaches the liquid, thus it would have been further obvious to one of ordinary skill in the art at the time of the invention to have the

compensating substance a liquid in order to correct the alterations to the axis of rotation characterized by Chao.

With regards to claim 18-20, Chao teaches the liquid is water, thus it would have been further obvious to one of ordinary skill in the art at the time of the invention to have the compensating substance being water in order to correct the alterations to the axis of rotation characterized by Chao.

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. *Strain, M. The Earth's Shifting Axis, 1997*; is cited for similar subject matter.

Response to Arguments

Applicant's arguments concerning the 35 USC 101 rejections have been found to be persuasive.

Applicant's further arguments with respect to claims 11-20 have been considered but are moot in view of the new ground(s) of rejection. It is noted that applicant failed to make any arguments concerning the Darwin reference.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to John Kreck whose telephone number is (703)308-2725. The examiner can normally be reached on 6:30-3:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Heather Shackelford can be reached on (703)308-2978. The fax phone

numbers for the organization where this application or proceeding is assigned are (703)305-3597 and (703)305-7687.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703)306-4177.

JJK
April 8, 2002


HEATHER SHACKELFORD
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